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EXAMINER
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ABOAGYE, MICHAEL

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/789,854  
Filing Date: February 26, 2004  
Appellant(s): BAKER ET AL.

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Paul D. Amrozowicz  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed September 14, 2007 appealing from the Office action mailed April 24, 2007.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

No amendment after final has been filed.

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

5,321,228	Krause et al.	06-1994
4,237,364	Lemelson	12-1980

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krause et al. (US Patent No. 5,321,228) in view of Lemelson (US Patent No. 4,237,364).

Krause et al. teaches a laser fusion welding torch system, comprising: a laser beam delivery system or installation including a laser source and a laser beam focusing mirror or lens (column 2, lines 17-25); a nozzle assembly adapted to be coupled or connected by a first end to said laser delivery system (column 2, lines 22-25); a laser duct included

in the nozzle assembly through which a laser beam from the laser delivery system passes and exit by an outlet aperture at a second end of the nozzle to a laser beam focal point (18), (figure 1 and column 4, lines 31-40). A plurality of powder or filler guide duct or port (6), provided in the nozzle assembly to receive powder or in fluid communication with a powder supply source (figure 1, column 2, lines 18-22 and column 4, lines 31-40); an outlet aperture (7), formed at the second end of the nozzle through which the powder exits and delivered to approximately the same focal point as the laser beam (figure 1 and column 4, lines 15-25) (see, the line of trajectory of both the laser beam and the powder or filler material intersecting at a focal point in front of the nozzle).

Krause et al., teaches independent off-axis filler media feed or powder feed assembly that is operable independent of the laser beam. Note the powder is feed from an independent source by a duct into the nozzle (column 2, lines 17-22).

Krause et al. teaches an off axis a gas flow delivery system operable to transmit gas to an operating site of the torch (gas duct "9", figure 1; column 2, lines 25-31 and column 4, lines 31-43).

Krause et al. also teaches a removable gas cover or cap (10) connected to the nozzle by the thread "17"; wherein said gas cover or cap is detachably couple to the nozzle; the gas cover having an aperture through which the laser beam from the laser beam delivery system may pass when the gas cover is coupled to the nozzle (column 4, lines 31-39).

Krause et al. does not expressly teach a laser fusion welding torch system with a handle to be grasped by a hand and thereby operable as hand held.

However, Lemelson teaches a hand held laser fusion torch system with a handle to be grasped by a hand ("18, 19" figures 1-3; column 1, lines 10-15); wherein said handle or trigger is operable to activate a laser beam generating source; wherein a localized area on a workpiece can be targeted for spot welding without distortion or overheating (Lemelson, column 1, lines 25-32).

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have provided the laser fusion torch system of Krause et al. with a handle or trigger as taught by Lemelson so that the device can be hand held, manually operable and the laser source can be hand activated thereby allowing for localized spot welding to be performed (Lemelson, column 1, lines 25-32).

#### **(10) Response to Argument**

With regards to the appellant's argument section on pages 8-11 of the appeal brief, the appellant's main argument is that Kruase et al. does not even remotely suggest independent adjustability of the laser beam focal point and the filler material focal point. The examiner agrees with the appellant's that Krause et al. does not explicitly recite the limitation "laser beam focal point and the filler material focal point are independently adjustable", However, Kruase et al. discloses a nozzle assembly with filler media feed or powder feed channel independent and separate from and also disposed off the axis of the laser beam path. Furthermore Krause et al. teaches a

powder guide cap separate or independent of the laser guide part (see, Krause et al., column 2, lines 39-42). It is the examiners position that this teaching of Krause et al. suggests separate and independent controls for the laser stream and the filler feed stream. Krause et al. also teaches that the clearance for introducing and distributing the stream of powder through the powder guide duct (6) is limited by the internal contour of an inert gas guide cap (8, column 4, lines 15-20) which threadedly couples with the powder guide cap 4. The examiner interprets this teaching as suggesting adjustability, because the powder guide duct clearance or annular path space can necessarily be altered by tightening the threads by say half turn or quarter turn (i.e. loosely tightening the caps 4 and 8); and this loosely tightening will necessarily change or adjust the centering of the powder or the filler stream in the annular path and ultimately the focal point or the delivery target will change. It is the examiner's position further that, the focal point of the laser beam of the Krause et al. device on the other hand can be adjusted independently of the powder stream by mere selection of different focusing lenses and mirror.

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**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejection should be sustained.

Respectfully submitted,



Michael Aboagye

Assistant Examiner

Art Unit 1793

Conferees:



Jonathan Johnson

JONATHAN JOHNSON  
SUPERVISORY PATENT EXAMINER



Romulo Delmendo

*Appeal Conferee*